



ESG to Impact Investing

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What is impact investing?

Impact investing is responsible investment which intentionally produces direct benefits for people and the planet. Institutions are now making investments that directly produce social and environmental impacts to go beyond environmental, social and governance (ESG) integration by simply rating companies for ESG compliance. Impact investing looks forward to the future to anticipate the planet's future needs and how to meet them. There is a growing demand for investments that produce measurable results in addressing ESG criteria and advancing the UN Sustainable Development Goals (SDGs). The SDGs include microfinance, education, healthcare, community as well as Sustainability. The sole focus of Earth Capital is Sustainability.

Earth Capital, a pioneer in impact investing since 2008, is a growth capital private equity investment manager totally focused toward Sustainability - investing capital into sustainable technologies for resource efficiencies and renewable clean energy infrastructure opportunities. We invest globally in companies and infrastructure which address the challenges of Sustainable Development, such as climate change, energy security, food and water security. We focus on the commercialisation and deployment of proven, sustainable technologies, in various industries including: agriculture, clean industry, energy generation, resource and energy efficiency, waste and water.

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Sustainability revolution

As former Vice President Al Gore has stated, “We are in the early stages of a global Sustainability Revolution that has the magnitude of the Industrial Revolution and the speed of the Digital Revolution.”

This Sustainability Revolution is juxtaposed to the Nobel prize-winning economist Milton Friedman's view that business had one and only one social responsibility - "to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game.”

In short, the economic model is changing as the rules of the game have fundamentally changed since Milton Friedman's days. As Blackrock CEO Larry Fink states, "Simply managing for short-term shareholder profit is not an acceptable management strategy. Society is now demanding that companies, both public and private, serve a social purpose.

To prosper over time, every company must not only deliver financial performance but also show how it makes a positive contribution to society. Companies must benefit all of their stakeholders, including shareholders, employees, customers, and the communities in which they operate."

How does impact investing work?

Impact investing allows investors to measure tangible investment results in the form of their social and environmental impact. It is the step beyond ESG integration for a portfolio. It intends to achieve a positive social or environmental impact and it commits to measure and report on the impact or outcome of its investments. To be successful, impact investing must measure the impact of its investments. In summary, by taking direct concrete action, impact investing produces measurable benefits in improving social and environmental impacts.

Two examples clarify the distinction. An ESG integration strategy, for example, identifies companies in a particular sector that perform better than peers in conserving energy to reduce costs and potential risks. An impact investing strategy, on the other hand, takes concrete action by funding the commercial rollout of new environmental technology to conserve energy and effectively combat global warming. Both strategies seek to improve environmental outcomes, but impact investing allows investors to make more concrete and measurable contributions.



Sustainability: an Impact Investment theme

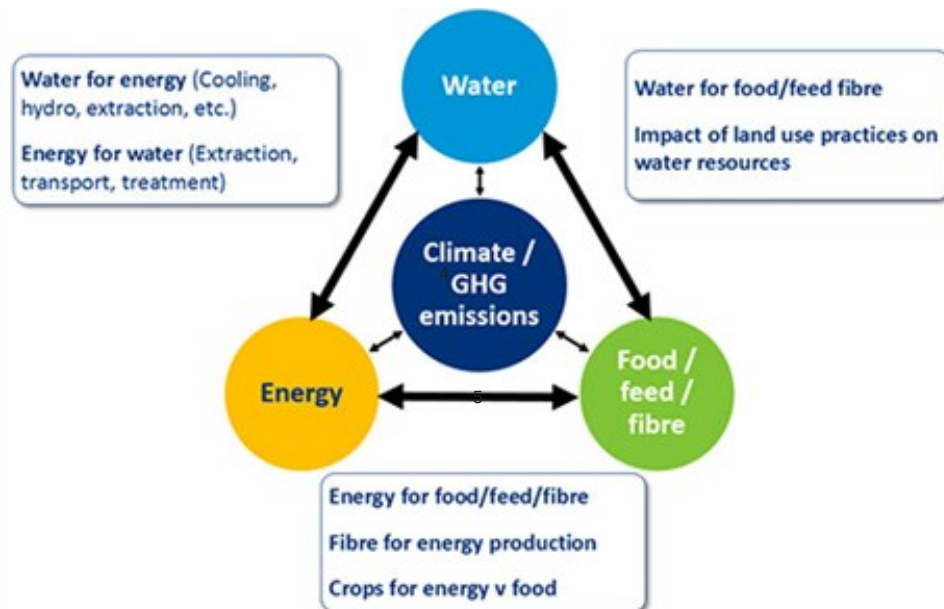
The Energy, Food, Water, Climate Change Nexusⁱ

The energy, food, water, climate change nexus is often cited as central to sustainable development and a prime example of their inter-connectivity. Demand for energy, food and water is increasingly driven by a rising global population, rapid urbanisation, changing diets and economic growth.ⁱⁱ Climate change affects the demand and supply of all of them. At the World Economic Forum in 2008, it was particularly emphasized that the risks of climate change for WEF sectors could be worsened if contradictions in water and energy resource use are overlooked.ⁱⁱⁱ In order to ensure that adaptation is effective, strategies need to be coherent and coordinated across water, energy and agriculture sectors.

Climate change affecting the supply of water which affects the supply of food is an example of their inter-connectedness. This creates substantial global opportunities for new sustainable technologies.

By 2050, 9.6bn people.^{iv, v}

- 55% more water demand
- 80% more energy
- 60% more food



Resource Efficiency and Renewable Clean Energy

To address the issues of sustainable development, Earth Capital focuses on clean, sustainable technologies.

Resource efficiency addresses food and water supply as well as the waste and energy challenges caused by the population growing to an estimated 9.6 billion by 2050.^{iv,v} Demand for all of these will grow as the population increases. Through sustainable development technologies, supply can increase to meet that demand and financing those technologies represents a significant investment opportunity today.

In terms of food supply, animal agriculture is among the largest contributor to global warming, emitting more greenhouse gases than cars, trucks, and airplanes.^{vi} The combination of natural resource scarcity, regulations against emissions and changing consumer preferences create attractive agricultural investment opportunities. For example, farm crops and waste streams can be recycled as low-cost, alternative feedstocks for the forest product and chemical industries. Resource efficiency investments offer the potential for investment in high-growth businesses with inherent cost advantages.

In terms of water supply, clean water is an increasingly sought-after resource with 98% of the world's water being saline and two-thirds of the remaining water being frozen.^{vii} There are more than 260^{viii} river basins in the world crossing international boundaries which raises the risk of disputes over-extraction and pollution.



The combination of natural resource scarcity, regulations against emissions and changing consumer preferences create attractive agricultural investment opportunities.

Resource Efficiency and Renewable Clean Energy

Rapidly growing Asian economies contain 60% of the world's population but only 36% of the world's available water.^{ix} Water scarcity is expected to lead to intense global pressure to become more efficient with how water is used for domestic, agricultural and industrial production purposes.

Technologies for the efficient allocation of water are a significant investment opportunity. For example, Arvia Technology, an Earth Capital portfolio company, has developed advanced technology treatment systems to cost-effectively treat wastewater by removing very low concentrations of highly toxic chemicals using much less energy than other methods.

Arvia Technology targets markets where the water contains carcinogenic contaminants such as pesticides and pollutants. As another example, Propelair, another Earth Capital portfolio company, makes a water efficient toilet that uses an integrated air pump to conserve and reduce the amount of water per flush from 6-8 litres to just 1.5 litres.

Population growth and rising consumption are likely to outstrip dwindling natural resources in the foreseeable future.^x

Resource efficiency investments are designed to save energy and reduce waste in production and consumption.

The investment opportunity can involve capturing cost savings from more efficient production and recycling consumer waste as cheaper raw material. One example is new technologies designed to improve the treatment of fresh produce by reducing food-borne illnesses. CDC research in the US has shown that new processes offer the potential to dramatically improve shelf life and food safety by eliminating 90% of insects and pathogens.^{xi} Impact investments are funding the commercial rollout of these new technologies and offering the potential for rapid expansion in the global fresh produce supply chain.



Impact Investing Going Mainstream

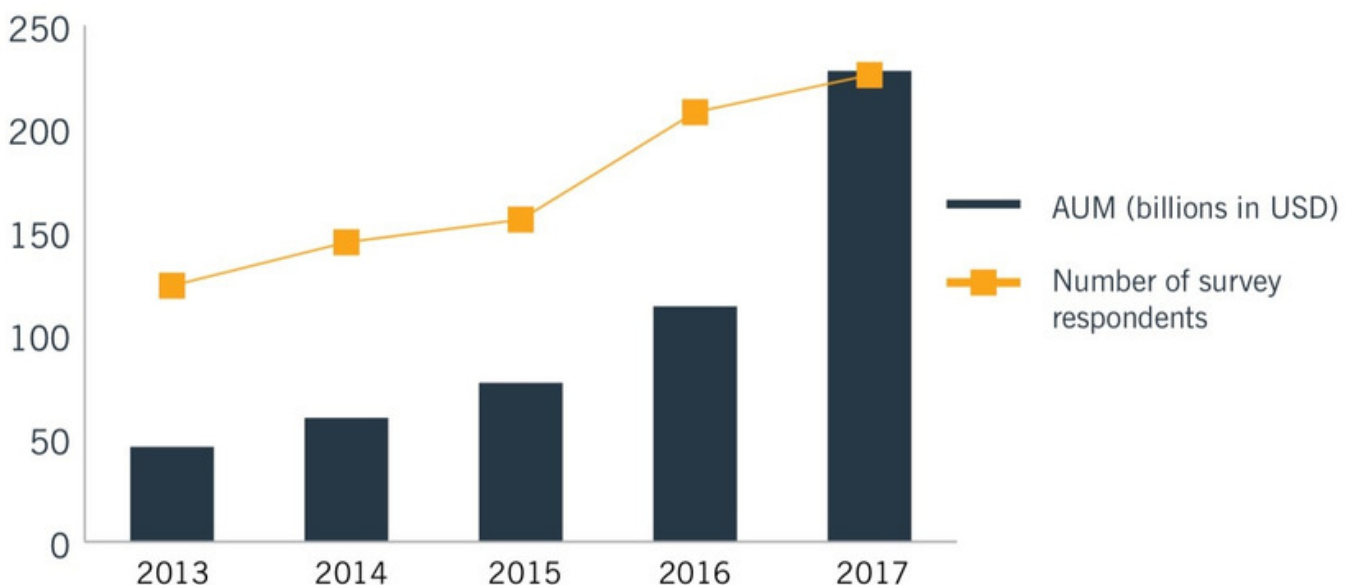
Impact investing is rapidly going mainstream. Responsible investment programs are expanding to produce direct benefits for people and the planet. Institutional investors are becoming one of the largest sources of impact investment capital.

In response to three key trends, institutions are making investments that directly produce social and environmental impacts to go beyond environmental, social and governance (ESG) integration by simply rating companies for ESG compliance. First, there is growing demand for investments that produce measurable results in addressing ESG criteria and advancing the SDGs. Second, various studies provide evidence that impact investments can achieve at least market-rate returns. Finally, through technology transfers, there are opportunities for institutional investors to put larger amounts of capital to work in scalable businesses such as environmental technologies.

Impact investing growing rapidly

The impact investing market is growing rapidly. Reported assets under management increased from \$46 billion in 2013 to \$228 billion in 2017, while the number of organisations reporting increased from 125 to 229 (Exhibit 1)^{xii} Annual funding commitments more than tripled to \$35.5 billion, and the number of investments more than doubled to 11,000 during the past five years.

Exhibit 1: Impact investing is growing rapidly



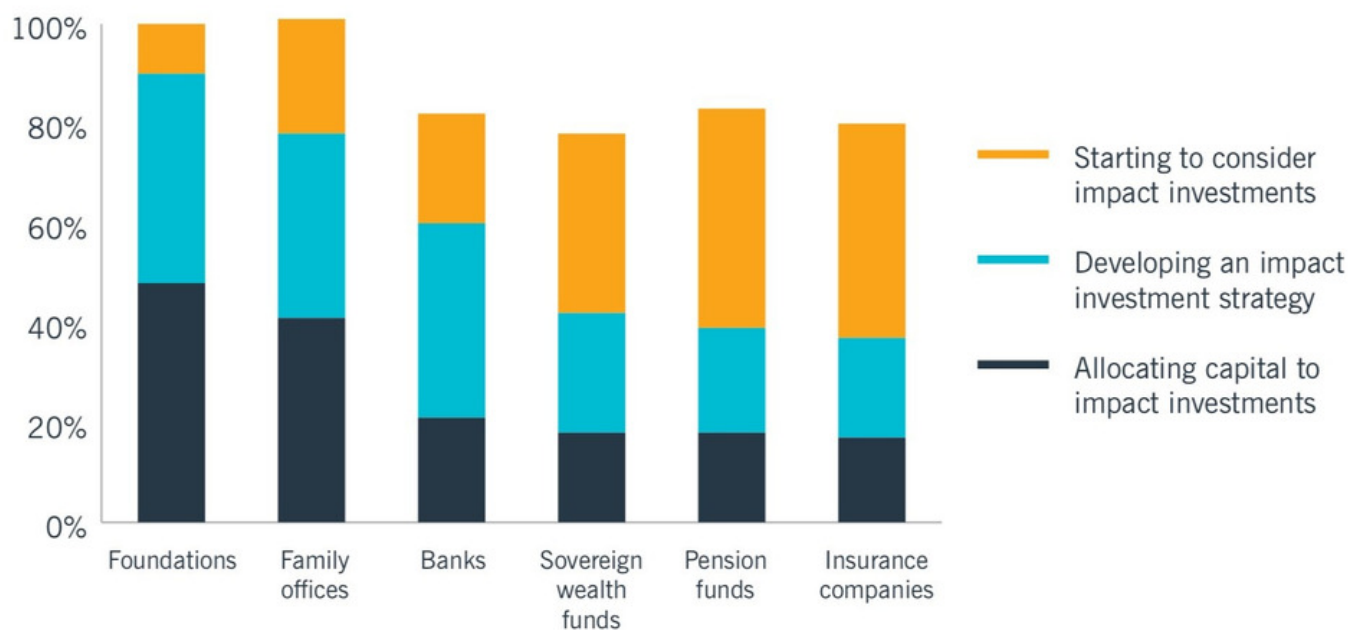
Note: Reported AUM reflect an increasing number of survey respondents.

Source: 2018 GIIN Annual Impact Investor Survey.

Growing interest from investors

There is growing interest from a variety of investors. The share of institutions already invested or starting to develop an impact strategy ranges from nearly 40% for pension funds and insurance companies, to almost 60% of banks and nearly 90% of foundations (Exhibit 2). The growth partly reflects the more recent influx of more traditional, for-profit financial institutions. In 2017, nearly half, or 46%, of the organizations surveyed were for-profit managers, compared with 13% not-for-profit managers and 13% foundations.

Exhibit 2: Growing interest from a range of investors



Source: 2017 GIIN Annual Impact Investor Survey.

Impact Investing Meets the Needs of Institutional Investors

The market's evolution has increased the range of opportunities meeting institutional investor criteria in terms of asset size and desired risk-return profile. It is no longer valid to assume that impact investments are necessarily small, early stage, high risk, not scalable, sacrifice returns and are better suited to non-profit organisations.

At Earth Capital, we are engaging in energy and agriculture projects coupled with technology transfers between our global network of affiliates which solves the scalability issue. Furthermore, research shows that institutional investors requiring market-rate returns are finding attractive investment opportunities with impact investing; sacrificing returns is now largely considered a myth.

Earth Capital is a leading impact investor

Experience

With more than 10 years of experience, Earth Capital is a leading impact investor with more than \$1.5 billion in AUM actively committed to making growth capital PE impact investments.

Our impact investing experience is broadly diversified in developed and emerging markets as well as in sustainable technologies for resource efficiency and in renewable clean energy projects and infrastructure in the nexus between climate change, energy, food and water.

Targeted investing

Earth Capital is a targeted investor, investing in sustainable developments such as sustainable technologies for resource efficiencies and renewable clean energy projects and infrastructure as the nexus between climate change, energy, food and water.

Measurement standards are improving

The ability to effectively measure and manage desired impacts is critical to ensuring that impact investments fulfill their stated objectives. Reliable metrics are needed to avoid the potential risk of “impact washing,” or using the label primarily for marketing and asset gathering purposes. Ideally, impact measurement and management is embedded in all phases of the investment process, from initial due diligence and project selection, to business management and reporting. Measurement shortcomings can include unclear objectives, poor data collection and analysis, inconsistent reporting and a lack of clear standards for what qualifies as an impact investment.

Through its Earth Dividend,[™] Earth Capital rigorously measures, manages and reports the impact of its investments to its investors annually.

Approach

Earth Capital's approach to impact investing focuses on two investment themes:

- Sustainable Technologies for Resource Efficiencies
- Renewable Clean Energy

These themes are specifically focused on and aligned with the sustainable development nexus between climate change, energy, food and water.



Conclusions

Impact investing is growing rapidly in response to rising demand for strategies that go beyond ESG integration to produce measurable benefits for people and the planet. With more than 10 years of experience, Earth Capital is a leading impact investor with more than \$1.5 billion in AUM actively committed to making growth capital PE impact investments. Our impact investing experience is broadly diversified in developed and emerging markets as well as in sustainable technologies for resource efficiency and in renewable clean energy projects and infrastructure in the nexus between climate change, energy, food and water.



Learn more

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Footnotes

- i "Supply chains are shaping the business models of the future"; Carbon Trust (2014)
- ii <http://www.unwater.org/water-facts/water-food-and-energy/>
- iii Allan, Keulertz, & Woertz, 2015 International Journal of Water Resources Development
- iv "World Population Prospects The 2012 Revision Key Findings"; UN (2012)
- v "Global Forum on Environment: New Perspectives on the Water-Energy-Food-Nexus" (OECD 2014)
- vi <https://www.nationalgeographic.com/foodfeatures/feeding-9-billion/>
- vii <https://water.usgs.gov/edu/earthwherewater.html>
- viii http://www.un.org/waterforlifedecade/transboundary_waters.shtml
- ix <http://www.un.org/waterforlifedecade/asia.shtml>
- x <https://www.theguardian.com/uk/2002/jul/07/research.waste>
- xi https://wwwnc.cdc.gov/eid/article/7/7/01-7706_article
- xii <https://thegiin.org/research/publication/annualsurvey2018>

